

## **ATTACHMENT A Remarks**

Applicant wishes to thank the Examiners, Mr. Snow and Ms. Miller for the courteous interview granted to Applicant's attorney, along with one of the inventors, Dr. Marnay and a representative of the assignee, Mr. Nichols on February 22, 2005. In accordance with the provisions of Rule 133(b), the reasons brought out at the interview as warranting favorable action are set forth below.

At the interview, the discussion primarily concerned independent claim 55 in relation to the Zdeblick et al and Bullivant prior art references. Applicant's attorney noted that the other independent claim 73 would also be amended to include limitations similar to those agreed upon with respect to claim 55.

A first aspect of the present invention is the provision of a single anchor on each of the upper and lower parts for stabilizing those parts in the vertebrae to which each is attached. To better define these anchors the present claims recite that they have a height greater than their width (and the specification has been amended to provide an antecedent for the particular wording used in the claims). Additionally, an aspect of these single anchors is that they are adapted to move into grooves in the adjacent vertebrae as the implant moves into the intervertebral space. While the present application does not illustrate the adjacent vertebrae, such grooves are illustrated in Dr. Marnay's previous U.S. Patent No. 5,314,477 which is referenced in the present specification. In order for the implant of the present invention to be so adapted, the anchor must be elongated in the direction of movement of the implant into the intervertebral space. Claim 55 describes as a frame of reference the path of movement

into the intervertebral space and recites that the anchors lie midway between lateral planes and parallel to said path.

At the interview, the Examiners and Applicant's attorney discussed different ways to describe such path in terms of the orientation of the various planes. In preparing the present amendment, the relevant portion of claim 55 has been amended to define the lateral planes as planes passing through the outermost boundaries of the implant and parallel to the path of insertion. The specification has been amended to provide an antecedent for this particular terminology.

Claim 73 differs from claim 55 primarily in that it recites the preferred embodiment wherein the upper and lower parts are generally rectangular. This claim has been amended to include all of the features which are now present in amended claim 55. However, since claim 73 is basically different from claim 55, for the reason discussed above, the amendments to the claim, although similar in substance, involve different wording.

In reviewing the dependent claims, it was observed that dependent claims 78 and 79 should be amended to render the terminology in those claims more consistent with their independent claim 73.

At the interview, the Bullivant U.S. Patent No. 5,507,816 was discussed. It was noted that each of the vertebrae have elongated generally rectangular channels formed therein, as best seen in Figure 1A, and the upper and lower plates 10 and 14 have raised platforms 20 and 24 which slide into those channels in the vertebrae. Thus, the direction of movement of the plates 10 and 14 is front to back, e.g., parallel to the vertical dotted lines in Figure 3A. It was noted that the semicircular ribs 22 and 26 are

not anchors, at least not as presently claimed in that they do not have a height greater than their width. Additionally, it is noted that the ribs are at an angle to the direction of movement of the plates 10 and 14 which is different from the claimed invention. Also, because they are at an angle to the direction of movement of the plates into the intervertebral space, they cannot move into a groove as the plates are inserted.

It was noted that the figures of Bullivant are inconsistent. Figure 1A suggests that the ribs 22 and 26 cross each other. Figures 2A-2E are consistent therewith. However, Figures 3A-3D of the bottom plate show the rib 26 being parallel to rib 22 rather than at an angle thereto. Nonetheless, whether these ribs are aligned with each other or at an angle to each other, for all of the above reasons they are clearly different from the claimed invention.

It was agreed at the interview that Zdeblick shows an artificial disc implant which is quite different from that of the present invention. Nonetheless, this reference was applied because it appeared to the Examiner that the terminology of the claims could be read on certain disclosures of this patent. Specifically, the Examiner noted that if the structures shown in Figure 3 or Figure 34 could be interpreted as an implant, and if one could interpret the uppermost ribs 18b and 19b of Figure 3 or 248 and 250 of Figure 4 as anchors, the Examiner believed that the claims could be read on such structure.

At the interview, it was noted that while certain double cylinder embodiments such as that shown in Figure 7 could be the sole inserted implant, the single cylinders of Figures 3 and 34 could never be inserted alone. It was noted that while many different embodiments of single cylinders are shown throughout the specification, when shown in

the environment of a disc space such as in Figures 46, 49a-51b, and Figures 54a-54e there are always two such cylinders.

First, it was agreed that the more specific definition of an anchor as having a height greater than its width distinguished Applicant's anchor from the ribs of Zdeblick.

It was further noted that with respect to the double cylinder arrangements which can be inserted in and of themselves, such as that shown in Figure 7, not even ribs, much less Applicant's anchors, are provided along the midline taken in the direction of movement of the implant into the intervertebral space.

Although it was agreed at the interview that a single cylinder of Zdeblick could not be inserted without an additional cylinder, and that there was no suggestion of same in the Zdeblick specification, Applicant has further amended the claim to recite that the implant of the present invention is constructed to be the sole implant in its intervertebral space, thus distinguishing from any possible interpretation of Zdeblick that the single cylinder of Figure 3 or Figure 34 could be inserted without a second cylinder.

**END REMARKS**